

Serial No.: 09/783,132
AMENDMENT
Page 2 of 12

LISTING OF CLAIMS:

Claims 1-19 (canceled)

Claim 20 (currently amended) A method of manipulating an electrophoresis gel slab, said method comprising the steps of:

providing a clamp having a first jaw with an operating end and a gripping end, and a second jaw with an operating end and a gripping end, said gripping ends being biased toward each other;

providing a gel slab having a length, a width and a side edge;

positioning said side edge between said gripping ends of said jaws and biasing said gripping ends toward said gel slab with sufficient pressure to grip said gel slab; and

lifting said clamp and vertically suspending said gel slab, said gripping ends of said jaws being biased together under sufficient force to grip said side edge of said gel slab substantially without tearing said gel slab;

moving said clamp to a position above a gel staining tank containing a staining liquid;

lowering said gel slab into said staining liquid;

supporting said clamp on an upper portion of in the gel staining tank thereby supporting said gel slab in said staining.

Claim 21 (canceled)

Serial No.: 09/783,132
AMENDMENT
Page 3 of 12

Claim 22 (previously presented) The method of claim 20, wherein said first and second jaws of said clamp include a magnet for biasing said gripping ends together.

Claim 23 (previously presented) The method of claim 20, wherein said magnets are coupled to said gripping ends of said first and second jaws.

Claim 24 (previously presented) The method of claim 20, wherein said second jaw pivots about an axis between an open position and a gripping position, said method comprising retaining said second jaw in said open position while positioning said side edge of said gel slab between said gripping ends, and thereafter releasing said second jaw to grip said gel slab.

Claims 25-48 (canceled)

Claim 49 (currently amended) A tank assembly for treating an electrophoresis gel with a treating liquid, said tank assembly comprising:

a treatment tank having a transparent side wall and being dimensioned to contain a liquid bath;

an agitator supported on said treatment tank, said agitator including a movable agitator member positioned in said tank at least partially submerged in the liquid bath, and being movable toward said transparent side wall; and

Serial No.: 09/783,132
AMENDMENT
Page 4 of 12

a drive member coupled to said agitator for moving said agitator and agitating the liquid contained in said tank; and

an imaging device proximate said transparent side wall, wherein with said agitator moved to urge the electrophoresis gel toward said transparent side wall, said imaging device focuses on the electrophoresis gel.

Claim 50 (currently amended) The assembly of claim 49, wherein said agitator member reciprocates along a plane substantially perpendicular to said side wall to agitate said liquid bath.

Claim 51 (previously presented) The assembly of claim 49, wherein said agitator member is a planar member having a dimension complementing a dimension of the electrophoresis gel.

Claims 52-76 (canceled)

Claim 77 (currently amended) A method of staining an electrophoresis gel slab, said method comprising the steps of:

positioning an edge of said electrophoresis gel slab between a first jaw and a second jaw of a gel clamp, each of said first jaw and said second jaw having a gripping end, where said gripping ends are biased together,

Serial No.: 09/783,132
AMENDMENT
Page 5 of 12

closing said gripping ends of first and second jaws onto said edge of said electrophoresis gel with sufficient pressure to grip said electrophoresis gel slab without damaging said gel,

lifting said gel clamp and vertically suspending said gel slab from said gel clamp, and positioning said gel slab in a staining vessel containing a gel staining liquid and staining said gel slab with portions of said clamp supported on said staining vessel.

Claim 78 (previously presented) The method of claim 77, wherein said first jaw is pivotal with respect to said second jaw.

Claim 79 (previously presented) The method of claim 78, wherein said gel clamp includes a biasing member and said method comprises biasing said first and second jaws together.

Claim 80 (previously presented) The method of claim 79, wherein said biasing member comprises a magnet.

Claim 81 (previously presented) The method of claim 79, wherein said biasing member comprises a first magnet on said first jaw and a second magnet on said second jaw.

Claim 82 (previously presented) The method of claim 77, further comprising the step of continuously moving said gels in said staining vessel during said staining step to agitate said staining liquid.

Serial No.: 09/783,132
AMENDMENT
Page 6 of 12

Claim 83 (previously presented) The method of claim 77, further comprising the step of continuously reciprocating said gels in a substantially linear direction during said staining to agitate said staining liquid.

Claim 84 (previously presented) The method of claim 83, wherein said staining vessel includes an agitating motor and said method comprises actuating said drive motor to reciprocate said gel slab in a substantially linear direction to agitate said staining liquid while staining said gel.

Claim 85 (previously presented) The method of claim 77, comprising positioning a plurality of said gel slabs in said staining vessel in a parallel spaced-apart relationship and continuously reciprocating said gel slabs in a linear direction to agitate said staining liquid.

Claim 86 (currently amended) A method of staining a plurality of electrophoresis gel slabs, said method comprising:

installing a plurality of said electrophoresis gel slabs in corresponding gel clamps,
with each one of said electrophoresis gels in a corresponding one of said gel clamps;
placing a plurality of said electrophoresis gel slabs in a tank containing a staining solution, said electrophoresis gel slabs being spaced-apart and oriented substantially parallel to each other, and said gel clamps supported on an upper portion of said tank thereby suspending said electrophoresis gel slabs in said staining solution, and

Serial No.: 09/783,132
AMENDMENT
Page 7 of 12

reciprocating said gel clamps and said electrophoresis gels in a substantially linear direction within said tank to agitate said staining solution and simultaneously staining said electrophoresis gels.

Claim 87 (canceled)

Claim 88 (currently amended) The method of claim 87, wherein said tank includes a reciprocating member and a motor operatively connected to said reciprocating member, each of said supports gel clamps being retained on said reciprocating member, and where said method comprising activating said motor and reciprocating said reciprocating member to reciprocate each of said gel clamps and said electrophoresis gel slabs and agitate said staining solution.

Claim 89 (new) A method of manipulating and staining an electrophoresis gel slab, said method comprising the steps of:

loading a side edge of an electrophoresis gel slab into a clamp, the clamp having a first jaw and a second jaw with operating ends and gripping ends, the gripping ends being biased toward each other to grip with sufficient pressure and retain the gel slab;

moving the clamp and retained gel slab above a gel staining tank containing a staining liquid;

lowering the clamp and gel slab into the staining liquid; and

*Serial No.: 09/783,132
AMENDMENT
Page 8 of 12*

staining the gel slab in the staining liquid wherein the clamp engages an upper portion of the gel staining tank thereby supporting the gel slab within the staining liquid during the staining process.

Claim 90 (new) A method as set forth in claim 89, further comprising:

moving the upper portion of the gel staining tank gently up and down thereby raising and lowering the clamp and gel slab within the staining liquid during the staining process.

Claim 91 (new) A method as set forth in claim 89, further comprising:

moving an agitator submerged within the staining liquid horizontally thereby pushing the gel slab against a transparent side of the gel staining tank;

generating an electronic image representing the gel slab held against the transparent side of the tank;

repeating said moving step and said generating step at predetermined time intervals during a staining process in order to monitor staining of the gel slab.

Claim 92 (new) A method as set forth in claim 89, further comprising:

loading a plurality of gel slabs into the gel staining tank wherein each gel slab is retained by a separate clamp, each separate clamp engaging the upper portion of the gel staining tank thereby supporting the gel slabs within the staining liquid during the staining process.